Express Mail No. EV 737279667 US
Application No. 10/007,383
Attorney Docket No.: 30454-00297
Attorney Reference: 52507-00013

Amendment dated September 12, 2005 Reply to Final Office Action mailed June 13, 2005

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for estimating signal-to-noise ratio of a forward traffic channel in a wireless communication system that utilizes a pilot channel, said method comprising:

estimating a signal-to-noise ratio for the pilot channel;

estimating an adjustment to convert the signal-to-noise ratio for the pilot channel to a signal-to-noise ratio for the forward traffic channel, wherein the adjustment comprises a fast correction component and a slow correction component; and

applying the adjustment to the signal-to-noise ratio for the pilot channel to obtain an estimate for the signal-to-noise ratio for the forward traffic channel[[.]],

wherein the adjustment is formed together by a fast correction component and a slow correction component, such that the fast and slow correction components are utilized jointly, instead of separately, when the adjustment is applied.

2. (Original) A method according to claim 1, wherein the signal-to-noise ratio for the pilot channel is multiplied by the adjustment to obtain the signal-to-noise ratio for the forward traffic channel.

Express Mail No. EV 737279667 US
Attorney Docket No.: 30454-00297
Attorney Reference: 52507-00013

Amendment dated September 12, 2005 Reply to Final Office Action mailed June 13, 2005

3. (Previously Amended) A method according to claim 1, wherein the fast correction component is updated more frequently than the slow correction component.

- 4. (Original) A method according to claim 3, wherein the slow correction component is updated at intervals of at least one frame.
- 5. (Original) A method according to claim 3, wherein the fast correction component is updated at an interval of not more than four power control groups.
- 6. (Original) A method according to claim 3, wherein the fast correction component is based on a power control signal sent to a base station in the wireless communication system.
- 7. (Original) A method according to claim 3, wherein the slow correction component is based on an estimation of a ratio of traffic channel power to a second estimation of traffic channel power that is based on pilot channel power.
- 8. (Original) A method according to claim 3, wherein the slow correction component is applied only if an estimate for the slow correction component has a magnitude that exceeds a set threshold.

Express Mail No. EV 737279667 US
Application No. 10/007,383
Attorney Docket No.: 30454-00297
Attorney Reference: 52507-00013

Amendment dated September 12, 2005 Reply to Final Office Action mailed June 13, 2005

9. (Original) A method according to claim 3, further comprising a step of estimating

a power control step size for a base station in the communication system using a result

from an estimation of the slow correction component.

10. (Original) A method according to claim 1, wherein the signal-to-noise ratio for

the pilot channel is estimated by summing signal-to-noise ratios for each finger in a

Rake receiver.

11. (Original) A method according to claim 1, further comprising a step of utilizing

the estimate for the signal-to-noise ratio for the forward traffic channel to perform

forward channel power control.

12. (Currently Amended) An apparatus for estimating signal-to-noise ratio of a

forward traffic channel in a wireless communication system that utilizes a pilot channel,

said apparatus comprising:

means for estimating a signal-to-noise ratio for the pilot channel;

means for estimating an adjustment to convert the signal-to-noise ratio for the

pilot channel to a signal-to-noise ratio for the forward traffic channel, wherein the

adjustment comprises a fast correction component and a slow correction component;

and

4

Express Mail No. EV 737279667 US

Attorney Docket No.: 30454-00297

Application No. 10/007,383 Attorney Reference: 52507-00013

Amendment dated September 12, 2005 Reply to Final Office Action mailed June 13, 2005

means for applying the adjustment to the signal-to-noise ratio for the pilot

channel to obtain an estimate for the signal-to-noise ratio for the forward traffic

channel[[.]],

wherein the adjustment is formed together by a fast correction component and a

slow correction component, such that the fast and slow correction components are

utilized jointly, instead of separately, when the adjustment is applied.

13. (Original) An apparatus according to claim 12, wherein the signal-to-noise ratio

for the pilot channel is multiplied by the adjustment to obtain the signal-to-noise ratio

for the forward traffic channel.

14. (Previously Amended) An apparatus according to claim 12, wherein the fast

correction component is updated more frequently than the slow correction component.

15. (Original) An apparatus according to claim 14, wherein the slow correction

component is updated at intervals of at least one frame.

16. (Original) An apparatus according to claim 14, wherein the fast correction

component is updated at an interval of not more than four power control groups.

5

Express Mail No. EV 737279667 US

Application No. 10/007,383 Attorney Docket No.: 30454-00297 Attorney Reference: 52507-00013

Amendment dated September 12, 2005 Reply to Final Office Action mailed June 13, 2005

17. (Original) An apparatus according to claim 14, wherein the fast correction

component is based on a power control signal sent to a base station in the wireless

communication system.

18. (Original) An apparatus according to claim 14, wherein the slow correction

component is based on an estimation of a ratio of traffic channel power to a second

estimation of traffic channel power that is based on pilot channel power.

19. (Original) An apparatus according to claim 14, wherein the slow correction

component is applied only if an estimate for the slow correction component has a

magnitude that exceeds a set threshold.

20. (Previously Amended) An apparatus according to claim 14, further comprising a

means for estimating a power control step size for a base station in the communication

system using a result from an estimation of the slow correction component.

21. (Original) An apparatus according to claim 12, wherein the signal-to-noise ratio

for the pilot channel is estimated by summing signal-to-noise ratios for each finger in a

Rake receiver.

Express Mail No. EV 737279667 US

Attorney Docket No.: 30454-00297

Application No. 10/007,383 Attorney Reference: 52507-00013

Amendment dated September 12, 2005 Reply to Final Office Action mailed June 13, 2005

22. (Original) An apparatus according to claim 12, further comprising means for utilizing the estimate for the signal-to-noise ratio for the forward traffic channel to perform forward channel power control.